

# PATENT

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In re Application of: James R. Burroughs )  
                                and Alan N. O'Kain )  
Serial No: 308,210 ) Art Unit: 114  
Filed: February 8, 1989 )  
For: BATTERY WITH STRENGTH INDICATOR ) Examiner:  
Reissue of U.S. Patent No. 5,015,544 )  
Issued: May 14, 1991 )  
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REISSUE DECLARATION AND POWER OF ATTORNEY

Applicants, James R. Burroughs and Alan N. O'Kain, citizens of the United States of America, declare that:

2. We believe that we are the original, first and joint inventors of the subject matter described and claimed in U.S. Letters Patent No. 5,015,544 granted on May 14, 1991 and in the attached specification for which invention we solicit a reissue patent.

4. We hereby state that we have received and understand the contents of the attached specification and claims of this reissue application.

5. We acknowledge our duty to disclose information which is material to the examination of this application in accordance with Section 1.56(a) of Title 37, Code of Federal Regulations.

6. We believe our original patent, U.S. Patent No. 5,015,544, to be partly or wholly inoperative because of error, without deceptive intent on part of the applicants, by reason of claiming less than we had a right to claim in the patent. Specifically, claims 1-11 as issued in our patent are limited to a battery having a battery strength indicator and switch means in which the battery indicator means is defined as a first chamber having indicating means therein formed between top and base nonconductive layers, the switch means is defined as a deformable second chamber formed between the top and base layers, and including first, second and third conductive means.

7. After becoming aware in late 1991 of U.S. Patent No. 5,059,895, issued on October 22, 1991 to Cataldi et al., we initiated review of the subject matter of claims 1-11 of our patent with our current patent attorney, Peter W. Peterson, who took over responsibility for the patent after it was allowed and issued. After reviewing these matters with Mr. Peterson, we began to realize that the inventive concept of the battery strength or voltage indicator disclosed in our patent does not require recitation of the specific construction of the battery indicator and switch means, or even the battery, as set forth in claims 1-11.

8. In a first aspect, we began to realize after review of the Cataldi et al. patent that the inventive concept of our patent does not require recitation of the specific construction of the battery indicator means as comprising a first chamber formed between top and base nonconductive layers and indicator means disposed therein, as set forth in claims 1-11. Instead, we believe this aspect of our inventive concept is broader in scope and requires only recitation of a battery strength indicator formed in a layer attached to a side of the battery

which undergoes a visible change when subject to a predetermined voltage output of the battery and a battery switch biased in an open position comprising a resilient, nonconductive, deformable layer on a side of the battery with a switch chamber disposed beneath the resilient layer, and the conductors electrically connecting the strength indicator and the switch chamber with each other and the battery terminals. To protect this aspect of the inventive concept of our patent, new claim 12 is set forth in this reissue application which eliminates the specific construction of the battery indicator means as recited in our original patent claims 1-11.

9. In another aspect, we began to realize after review of the Cataldi et al. patent that the inventive concept of our patent does not require recitation of the battery or the battery switch means, as set forth in claims 1-11. Instead, we believe this aspect of our inventive concept is broader in scope and requires only recitation of a voltage indicator comprising a dielectric layer; a conductive layer above or below one of the surfaces of the dielectric layer; and a temperature sensitive color indicator layer or material in thermal contact with the conductive layer, characterized in that the conductive layer has an air pocket such as a portion of a sealed chamber, cell or bubble below one of its surfaces and sufficient heat generating capacity to effect a change in the temperature sensitive color indicator material, where optionally the temperature sensitive color indicator material is formed from a material which undergoes a non-permanent or visible color change when exposed to a predetermined temperature or may undergo a visible color change when exposed to a predetermined temperature. To protect this aspect of the inventive concept of our patent, new claims 13-15 are set forth in this reissue application which eliminate the battery and the battery switch means as recited in our original patent claims 1-11. At the same time, we realized that

this aspect of the inventive concept of our patent was set forth in claims 1-10 of the Cataldi et al. patent, and that our patent provided a basis to support and copy claims 1, 6 and 7 of the Cataldi et al. patent, which we have done and set forth as new claims 30-32 of this reissue application, which are directed to the same or substantially the same subject matter as claims 13 and 15. As such, claims 13-15 and 30-32 of this reissue application are presented at least in part to provoke an interference with the Cataldi et al. patent.

10. In a further aspect, we began to realize after review of the Cataldi et al. patent that the inventive concept of our patent does not require recitation of the battery or the specific construction of the battery switch means as comprising a deformable second chamber formed between top and base nonconductive layers, and spaced apart conductive means within the chamber which may be brought into contact by pressing the chamber, as set forth in claims 1-11. Instead, we believe this aspect of our inventive concept is broader in scope and requires only recitation of a label or article comprising an integral battery voltage indicator having a dielectric layer; a conductive layer above or below the dielectric layer; and a temperature sensitive color indicator layer or material in thermal contact with the conductive layer, characterized in that the conductive layer has sufficient heat generating capacity to effect a change in the temperature sensitive color indicator material and sufficient coupling means or non-conducting or thermal insulating means under one of its surfaces to overcome heat sinking and permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material and indicate voltage when the voltage indicator is in contact with a battery housing, which is normally electrically conductive, and the voltage indicator includes means for forming an electrical switch with an electrically conductive portion of the battery housing, and where, optionally, the nonconducting or temperature

insulating means is an air pocket, sealed chamber, cell, bubble or layer of nonconductive or temperature insulating material, and the label or article has a plurality of layers in the order recited, including one or more substrate layers between the conductive layer and the temperature sensitive color indicator layer or material. To protect this aspect of the inventive concept of our patent, new claims 16-19 and 50 are set forth in this reissue application which eliminate the battery and the specific construction of the battery switch means as recited in our original patent claims 1-11. At the same time, we realized that this aspect of the inventive concept of our patent was set forth in claims 11-19 of the Cataldi et al. patent, and that our patent provided a basis to support and copy claims 11, 12, 18 and 19 of the Cataldi et al. patent, which we have done and set forth as new claims 33-36 of this reissue application, which are directed to the same or substantially the same subject matter as claims 16-19. As such, claims 16-19, 33-36 and 50 of this reissue application are presented at least in part to provoke an interference with the Cataldi et al. patent.

11. In yet another aspect, we began to realize after review of the Cataldi et al. patent that the inventive concept of our patent does not require recitation of the specific construction of the battery switch means as comprising a deformable second chamber formed between top and base nonconductive layers, and spaced apart conductive means within the chamber which may be brought into contact by pressing the chamber, as set forth in claims 1-11. Instead, we believe this aspect of our inventive concept is broader in scope and requires only recitation of a battery having a label or article with an integral battery voltage indicator having a dielectric layer; a conductive layer above or below the dielectric layer; and a temperature sensitive color indicator layer or material in thermal contact with the conductive layer, characterized in that the conductive layer has

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sufficient heat generating capacity to effect a change in the temperature sensitive color indicator material and sufficient non-conducting or thermal insulating means under one of its surfaces to overcome heat sinking and permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material and indicate voltage when the voltage indicator is in contact with a battery housing, which is normally electrically conductive, and the voltage indicator includes means for forming an electrical switch with an electrically conductive portion of the battery housing, and where, optionally, the nonconducting or temperature insulating means is an air pocket, sealed chamber, cell, bubble or layer of nonconductive or temperature insulating material, and the label or article has a plurality of layers in the order recited, including one or more substrate layers between the conductive layer and the temperature sensitive color indicator layer or material. To protect this aspect of the inventive concept of our patent, new claims 20-23 are set forth in this reissue application which eliminate the specific construction of the battery switch means as recited in our original patent claims 1-11. At the same time we realized that this aspect of the inventive concept of our patent was set forth in claims 20-29 of the Cataldi et al. patent, and that our patent provided a basis to support and copy claims 20, 21, 28 and 29 of the Cataldi et al. patent, which we have done and set forth as new claims 37-40 of this reissue application, which are directed to the same or substantially the same subject matter as claims 20-23. As such, claims 20-23 and 37-40 of this reissue application are presented at least in part to provoke an interference with the Cataldi et al. patent.

12. The true and broader scope of the inventive concept of our patent, as we now understand it to be in the aforementioned aspects, became more fully appreciated by us in mid-1992 after

licensing negotiations with major U.S. battery manufacturers and marketers, and at the end of July, 1992, when we also became aware of a published European patent application of the Eveready Battery Company, Inc., based on U.S. application serial no. 641,394 filed January 15, 1991, which disclosed a battery with tester label similar to our inventive concept.

13. In September of 1992, we became aware of a reissue application filed for the Cataldi et al. patent and further realized that the inventive concept of our patent does not require recitation of the specific construction of the battery switch means as comprising a deformable second chamber formed between top and base nonconductive layers, and spaced apart conductive means within the chamber which may be brought into contact by pressing the chamber, as set forth in claims 1-11. Instead, we believe this aspect of our inventive concept is broader in scope and requires only recitation of a battery having with an integral battery voltage indicator comprising a battery having terminals of opposite polarity and being defined by a battery housing or can, and a voltage indicator, integral with the battery, comprising a conductive layer; a temperature sensitive color indicator layer or material in thermal contact with the conductive layer wherein the conductive layer has sufficient heat generating capacity to effect a change in the temperature sensitive color indicator material; means to provide thermal insulation and prevent conduction between the conductive layer and the battery housing to prevent the battery from acting as a heat sink for the conductive layer and permit the heat generated by the conductive layer to change the color of the temperature sensitive color indicator material and indicate voltage when the voltage indicator is in contact with a battery housing; and electrical switch means positioned, when activated, to electrically connect the conductive layer and a conductive portion of the battery housing or can to effect a color change

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in the temperature sensitive color indicator layer or material. To protect this aspect of the inventive concept of our patent, new claims 24-29 are set forth in this reissue application which eliminate the specific construction of the battery switch means as recited in our original patent claims 1-11. At the same time we realized that this aspect of the inventive concept of our patent was set forth in claims 30-39 of the Cataldi et al. reissue application, and that our patent provided a basis to support and copy claims 30, 31, 35, 36, 37 and 39 of the Cataldi et al. reissue application, which we have done and set forth as new claims 44-49 of this reissue application, which are directed to the same or substantially the same subject matter as claims 24-29. Additionally, we have copied claims 3, 7 and 29 of the Cataldi et al. reissue application, which we have set forth as claims 41-43, and have set forth the same or substantially the same subject matter in claim 14. As such, claims 14, 24-29 and 41-49 of this reissue application are presented at least in part to provoke an interference with the Cataldi et al. reissue application.

14. We have been informed by our current attorney, Peter W. Peterson, that the aforementioned errors render claims 1-11 of our patent wholly or partly inoperative by reason of claiming less than we were entitled to claim in view of the claims issuings to Cataldi et al. of U.S. Patent No. 5,059,895, which claims the same or substantially the same subject matter as disclosed in our patent. We are presenting claims 13-49 herein in part for the purpose of requesting an interference with U.S. Patent No. 5,059,895 and the reissue application for such patent, which claims are supported by the disclosure of our patent and which we believe are new and not obvious from the prior art of which we are aware.

15. We believe that the errors which render our patent wholly or partly inoperative arose from inadvertence, accident



or mistake, and without any fraudulent or deceptive intention on our part. The reasons for the errors constituting such inadvertence, accident, and mistake were that we failed to communicate the inventive concept of our battery strength indicator properly to our original Attorney, William G. Lane, who we engaged to prepare and file our patent application. We also failed to communicate the inventive concept of our battery strength indicator to Attorney Cornelius F. O'Brien, who we subsequently engaged for substantive prosecution of our patent application and who obtained allowance of the application. In this regard, it should be noted that Mr. O'Brien agreed to take on and first saw our application several weeks after the office action dated February 9, 1990, and so he did not have the benefit of the full background of preparing and filing the application. Further, we both reside in California and Mr. O'Brien resides in Connecticut, and all communication with Mr. O'Brien was by telephone, which probably contributed to the error in communication. In addition, we did not adequately understand the unduly limiting effect of the specific recited features of the battery, strength indicator means and switch means in claims 1-11 of said patent because we are not familiar with patent law. Accordingly, this reissue patent application to obtain a broader scope of protection than that of claims 1-11 of said patent is believed proper in that the features in the claims of narrower scope in our patent are not essential for practicing the broad inventive concept disclosed therein, the claims of our patent are unduly narrow, and the errors in the original patent arose without fraudulent or deceptive intention on the part of the applicants. As to claims 1-11 of our patent, we believe that new claims 12-50 correct the inoperability defect since they claim our inventive concept more broadly by variously eliminating the requirements of the battery, specific battery indicator means construction and/or specific switch means construction, as described above.

16. The undersigned applicants declare further that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

We hereby appoint Anthony P. DeLio, Reg. No. 18,729, and Peter W. Peterson, Reg. No. 31,867, of the firm of DeLio & Associates in New Haven, Connecticut, and John H. Mion, Reg. No. 18,879, of the firm of Sughrue, Mion, Zinn, MacPeak & Seas in Washington, D.C., our attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith. Send all correspondence to:

Peter W. Peterson  
DeLio & Associates  
121 Whitney Avenue  
New Haven, Connecticut 06510.

Wherefore, we hereby subscribe our names to the foregoing Reissue Application, Declaration and Power of Attorney.

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Date

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Date

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